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	CLIENT:	ALL	SHEET			1 of 8	
	PROJECT:	ALL				-	
	AREA:	GENERAL				-	
SUPRIMENTOS/ RMF/RFDQ	TITLE: <b>REQUIREMENTS FOR QUALITY AUDITS IN THE FPSO SUPPLY CHAIN</b>					PUBLIC	
						GQS	
<b>INDEX OF REVISIONS</b>							
<b>REV.</b>	<b>DESCRIPTION AND/OR ALTERED SHEETS</b>						
0	Original Issue						
	REV. 0						
DATA	20/05/2022						
PROJECT	GQS						
EXECUTION	ES29, UPKG						
VERIFICATION	ES29						
APPROVAL	TW90						

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## 1. PURPOSE

This Technical Specification aims to establish the requirements for Quality Audits in EPC Contracts to be met by the supply chain for FPSO construction.

## 2. SCOPE

2.1. This document shall be applied to the equipment, systems, and sub-systems manufacturers', according to the project's scope of supply, and shall cover the SELLER's suppliers and sub-suppliers.

NOTE 1: The communication with PETROBRAS shall be via the contract manager and the communication matrix defined for the project.

## 3. REFERENCES

- 3.1. ISO 9001:2015 – Quality Management Systems – Requirements.
- 3.2. I-ET-3010.00-1200-940-P4X-002 GENERAL TECHNICAL TERMS

## 4. DEFINITIONS, TERMINOLOGIES, AND ACRONYMS

### 4.1. Notice of Divergence Occurrence – NDO

The procedure that notifies the SELLER, including its suppliers and sub-suppliers, about the occurrence of non-compliance with technical or contractual conditions.

This notification is issued by the BUYER and is handled internally by the PETROBRAS Quality Department.

It aims to lead the SELLER and its suppliers and sub-suppliers to make corrections, identify the root causes and implement corrective actions in their Quality Management Systems, under the requirements of the ISO 9001:2015 standard.

### 4.2. EPC – *Engineering, Procurement and Construction*


It is the company hired by PETROBRAS to carry out the design, supply, and construction of the project.

### 4.3. SELLER

The Organization responsible for the detailed design, purchase of all instruments, equipment, system, unit, material, assembly, and construction, commissioning, lift, hook up, installation, and integration of all Modules on the Unit Hull.

### 4.4. Manufacturer

Organization part of the supply chain and responsible for the fabrication of equipment under the technical requirements stated in the Contractual Instrument.

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#### 4.5. Supplier

It is the Organization part of the supply chain that will provide the goods, according to the technical requirements stated in the Contractual Instrument.

#### 4.6. Contract Manager

PETROBRAS employee, responsible for all contractual subjects.

#### 4.7. Supplier Quality Indicator – IQF

Value, between 0 and 100%, resulting from SELLER's performance after the PETROBRAS Quality Audit.

#### 4.8. Organization

Corporation involved in the supply chain of the good or service scope of the contract and subject to contractual requirements, either as SELLER, supplier, or sub-supplier.

#### 4.9. Audit Body

The PETROBRAS Quality department formally designated to perform the quality audits in the SELLER's supply process and inspection service.

#### 4.10. Purchase Order

Document issued to supply goods and services associated with values, terms and conditions.

#### 4.11. Corrective Action Plan – CAP

A Plan elaborated by the SELLER or its supplier, reporting the corrective actions related to identification of the root cause of a nonconformity, to be implemented in its Quality Management System.

#### 4.12. Responsible for Manufacturing Inspection – RMI

The Responsible for Manufacturing Inspection shall be capable to coordinate, plan and execute the Manufacturing Inspection Service.


The RMI function can be performed by qualified EPC personnel or by a hired Inspection Body.

#### 4.13. Manufacturing Inspection Service

Service provided by the SELLER or by a hired Inspection Body for the execution of Manufacturing Inspection activities. Shall be performed by a qualified manufacturer inspector, according to DIRECTIVES FOR PROCUREMENT requirements.

#### 4.14. FPSO

Floating, Production and Storage of Offloading

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## 5. PETROBRAS QUALITY AUDIT

### 5.1. General

**5.1.1.** During the project execution, PETROBRAS may perform presential or remote audits at the SELLER, suppliers, or sub-suppliers facilities with the purpose of conformity assessment of the quality management system, the manufacturing process, the product, and the inspection records.

**5.1.1.1.** PETROBRAS shall communicate the performance of the audit 20 calendar days in advance, together with the list of documents that shall be available within 10 calendar days before the start of the audit. In case of missing the deadlines above or refusal to receive the Quality Audit, without justification accepted by PETROBRAS, a contractual fine can be applied to the SELLER, according to the contractual instrument. Additionally, it will be considered that the audit was performed with IQF equal to 0 (zero).

**5.1.1.2.** During the audit, the Organization shall provide an appropriate office for the audit team, with an air-conditioned environment and data network.

**5.1.2.** PETROBRAS reserves the right to audit, at any time, the application and maintenance of the requirements defined in the contractual instrument at the SELLER, suppliers, and sub-suppliers.


**5.1.3.** The audits periodicity will be defined by PETROBRAS, considering, among other aspects, the criticality of the good for the operation, the complexity of the manufacturing process, the SELLER, suppliers, and sub-suppliers history, the market in which it operates, the occurrence of field failures, pioneering design and unprecedented supply.

**5.1.3.1.** SELLER's representative shall take part in Quality Audit at suppliers and sub-suppliers.

**5.1.4.** The audit may be performed at the plant of the respective (s) manufacturer(s) or remotely at Petrobras's sole discretion.

### 5.2. Responsibility for Quality Audits

**5.2.1.** PETROBRAS will be responsible for planning and performing presential and/or remote audits at the SELLER, supplier, and sub-suppliers facilities, regarding the contractual requirements during the supply of the good.

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NOTE 2: For each project, PETROBRAS may prepare a list of audit events with the minimum inspection and test events in which verification must be carried out by PETROBRAS. At PETROBRAS' discretion, new audit events may be defined throughout the SELLER's supply process.

**5.2.2.** The Organization shall provide resources to enable remote audits, including document sharing and a video conference system.

### **5.3. Scope of the Quality Audit**

The Quality Audit can include the following aspects:

**5.3.1. Quality Management System:** verification of compliance with the contractual requirements of the Organization's Quality Management System.

**5.3.2. Manufacturing Process:** verification of compliance with contractual requirements in the manufacturing process of the good, such as manufacturing procedures, inspection and testing, quality meeting minutes, inspection and tests records generated during manufacturing, among other documents required by the contractual instrument.

**5.3.3. Manufacturing Inspection:** verification of compliance with the contractual instrument requirements and its annexes, such as issuance of inspection records, and participation in manufacturing.


**5.3.4. Final Acceptance:** verification of conformity concerning the contractual requirements of the finished product, including Databook.

### **5.4. Execution of the Quality Audit**

**5.4.1.** PETROBRAS will carry out a kickoff meeting on the first day of the audit, with the participation of the auditing team and the SELLER, supplier, or sub-supplier Quality representatives.

**5.4.2.** During the audit, the audited organization shall designate a focal point to provide all requested documentation, and evidence of the attendance of each item of verification and make available the resources demanded by the audit team to verify compliance with the contractual requirements.

**5.4.3.** PETROBRAS will carry out a closing meeting with the presence of the audit team and the representatives of the Organization, where they will be informed about the points of improvement and nonconformities observed.

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## 5.5. Records of the Quality Audit

**5.5.1.** At the end of the closing meeting, the minutes will be issued for the signature of all participants. The minutes shall include the points of improvement, observations and non-conformities identified.

**5.5.2.** An audit report, containing the findings of the audit team with the respective evidence, including IQF, will be forwarded to the Organization within 15 calendar days after the end of the audit.

**5.5.2.1.** The Organization, upon receipt of the audit report, may submit an appeal to the findings of PETROBRAS.

**5.5.3.** If SELLER obtains an IQF less than 80.0% in any audit, a PETROBRAS System of Consequences for Suppliers can be applied.

## 5.6. Control and Monitoring of Nonconformities

**5.6.1.** The Organization shall submit to PETROBRAS a Corrective Action Plan to mitigate all Nonconformities observed during the audit within 15 calendar days of receipt of the final audit report.

**5.6.2.** The Corrective Action Plan shall contain the proposed actions, scope, implementation deadlines, and the Organization quality focal points responsible for each proposed action.


**5.6.3.** The Corrective Action Plan shall be submitted to PETROBRAS for review and approval, which will respond within 15 calendar days.

**5.6.4.** PETROBRAS may verify the effectiveness of the Corrective Action Plan implemented at any time. When applicable, SELLER shall monitor the implementation and effectiveness of the Corrective Action Plan by the suppliers.

## 6. NOTICE OF DIVERGENCE OCCURRENCE – NDO

### 6.1. General

**6.1.1.** Upon receipt of the goods, PETROBRAS may notify the SELLER and its suppliers and sub-suppliers, whenever technical divergences or low performance of the acquired goods are identified. The record of these divergences is called “Notice of Divergence Occurrence” - NDO.

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**6.1.1.1.** The NDO aims to eliminate such divergences in PETROBRAS operational units and, additionally, to prevent their recurrence, as it encourages the SELLER and its suppliers to improve the performance of the goods supplied, contributing this way to the continuous improvement of their manufacturing projects and processes.

**6.1.2.** The SELLER and its suppliers shall record the divergence in its Quality Management System (QMS), according to its internal procedures.

**6.1.3.** The SELLER and its suppliers shall submit to PETROBRAS a Divergence Investigation Plan (DIP) to mitigate the divergence(s) communicated by PETROBRAS within 15 calendar days upon notification receipt. The failure to comply with this deadline, without due justification accepted by PETROBRAS, constitute non-compliance with contractual conditions subject to a contractual fine.

**6.1.3.1.** The DIP shall contain the minimum activities as planned by the Organization and necessities for the divergence investigation, cause identification, Corrective Action Plan (CAP) definition, and registration of CAP in the QMS, as requested in the letter of NDO notification, issued by PETROBRAS.

**6.1.4.** After the DIP completion, a CAP shall be elaborated using quality tools and shall contain at least the immediate corrections, cause analysis, determination of corrective actions, and respective results including their effectiveness to prevent the divergence recurrence. The CAP shall also include the implementation deadlines, SELLER, and its suppliers' focal points responsible for each proposed action.

**6.1.5.** The CAP shall be submitted for analysis and approval by PETROBRAS, which will issue a response within 15 calendar days.

**6.1.6.** Whenever the CAP involves rework or a new manufacturing process to replace the good with divergence, the release and return of the good to PETROBRAS is conditioned to the inspection and approval by the Responsible for Manufacturing Inspection (RMI).

**6.1.7.** The failure to comply with the deadlines defined in this section, without the justification accepted by PETROBRAS, constitutes non-compliance with contractual conditions and is subject to a contractual fine.

**6.1.8.** The NDO may be concluded after the CAP approval by the PETROBRAS Quality Department and the internal department that identified the divergence.